

SEQUENCE LISTING**(1) GENERAL INFORMATION****(i) APPLICANTS:**

(A) NAME: Advanced Technologies (Cambridge) Limited
(B) STREET: Globe House, 1 Water Street
(C) CITY: London
(E) COUNTRY: England
(F) POSTAL CODE: WC2R 3LA

(ii) TITLE OF INVENTION:

Modification of Plant Fibres

(iii) NUMBER OF SEQUENCES:

8

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: British American Tobacco (Investments) Limited
(B) STREET: Regents Park Road
(C) CITY: Southampton
(D) STATE: Hampshire
(E) COUNTRY: England
(F) POSTAL CODE: SO15 8TL

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Diskette 3.50 inch
(B) COMPUTER: Viglen P5/75
(C) OPERATING SYSTEM: MS-DOS Windows 95
(D) SOFTWARE: Microsoft Word 97

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: Not yet known
(C) CLASSIFICATION: Not yet known

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Mrs. M.R. Walford/ Mr. K.J.H. MacLean
(C) REFERENCE: RD-ATC-19

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 01703 777155
(B) TELEFAX: 01703 779856

(2) INFORMATION FOR SEQ.ID. NO:1**(i) SEQUENCE CHARACTERISTICS**

(A) LENGTH: 488 bps
 (B) TYPE: Nucleic acid
 (C) STRANDEDNESS: Double
 (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: cDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Eucalyptus grandis

(xi) SEQUENCE DESCRIPTION: SEQ. ID. NO:1:

ATGGGGGGGG CTGTGTTGGTA TGGCAACCTTG TACAGCCAAG GCTATGGCAC 50
 CAACACTGCA GCTTTGAGCA CTGCCCTGTT CAACAATGGC CTGAGCTGCG 100
 GGGCATGTTA CGAGATGCGG TGCAACGACG ACCCCAGGTG GTGCCCTCCCG 150
 GGGACCATCA TGGTCACGGC AACCAACTTT TGCCCTCCCA ACTTGGCCCT 200
 CTCCAACGAC AATTGCGGCT GGTGCAACCC CCTCTCCAG CACTTCGATA 250
 TGGCCGAGCC TGCTTTCTTG CAGATTGCCC AGTACAAAGC TGGGATTGTC 300
 CAGGTTTCCT TCAGAAGGGT TCCGTGTGTG AAGAAAGGAG GGGTAAGGTT 350
 CACCATCAAT GGGCACTCCT ACTTCAACTT GGTCCTGATC ACCAACGTGG 400
 GAGGIGCTGG TGATGTCCAT TCCGTTTCCA TCAAGGGCTC GAGGACTGGT 450
 TGGCAAGCCA TGTCAAGGAA CTGGGGCAAA AACTGGCA 488

00550-049660

(i) **SEQUENCE CHARACTERISTICS:**

- ~~475 base pairs
Nucleic acid
Double
Linear~~

- cDNA

- (A) ORGANISM: / *Eucalyptus grandis*

- SEQ. ID. NO:2:

ATGGGGGGGG	CATGCGGGTA	TGGCAACCTG	TACAGCCAAG	GCTATGGCAC	50
CAACACTGCA	GCTTTGAGCA	CTGCGCTGNT	CAACAATGGC	CTGAGCTGCG	100
GGGCATGTTA	CGAGATGCGG	TGZAACGACG	ACCCACGGTG	GTGCGTCCCG	150
GGGACCATCA	TGGTCACGGC	AACCAACTTT	TGCGCTCCCA	ACTTGGCCCT	200
CTCCAACGAC	AATGGGGGCT	GGTGCAACCC	CCCTCTCCAG	CACCTCGATA	250
TGGCCGAGCC	TGCTTTCITG	CAGATTGCCC	AGTACAAAGC	TGGGATTGTC	300
COGTTTCCCT	TCAGAAGGGT	TCGTTGTGIG	AAGAAAGGAG	GGGTAAGGTT	350
CACCATCAAT	GGGCACTCCT	ACTTCAGCTG	TGGTGCTGAT	CACCAACGTG	400
GGAGGTGCTG	GIGATGTCCA	TTCGGTTTCC	ATCAAGAGCT	CGAGGACTGG	450
TTGGCAAGCC	ATGTCAAGGA	AATTGA			475

(i) **SEQUENCE CHARACTERISTICS:**

- | | | | | | |
|-------------|------------|------------|-------------|-------------|-----|
| ATGGGGGGGG | CATGTGGTTA | CGGGGACCTT | CACAGGGCCA | CCTATGGCAA | 50 |
| GTACAGTGCC | GGCTTGAGCT | CGATGCTGTT | CAACAGAGGG | AGTACCTGCG | 100 |
| GGGCTTGCTT | CGAGCTCCGG | TGCGTCGACC | ACATTTTGIG | GTGCTTCCCT | 150 |
| GGTAGCCCGT | CGGTGATCCT | CACCGCCACC | GACTTCTGCC | CTCCGAAC TA | 200 |
| CGGGCTCGCG | GCAGATTACG | GCGGGTGGTG | CAACTTCCCG | CAGGAGCACT | 250 |
| TCGAGATGTC | GGAGCCCGCC | TTCGCGGAGA | TTGCGGTGCG | AAGGGCTGAT | 300 |
| GTGGTGCTTA | TCCAGTACAG | GAGGGTGAAC | TGTCTGAGAA | GCGTGGTCT | 350 |
| GAGATTCA CA | TTGAGCGGAA | ACTCTCACTT | CTTTCAGGTC | TTGGTGACGA | 400 |
| ATGTAGGCCT | AGATGGGGAG | GTGATTGCCA | TGAAAATGAA | GGATCGAAA | 450 |
| ACAGGGTGCA | TACCGATGGC | AAGAACTGG | GGCAAAAAC T | GGCA | 494 |

(2) INFORMATION FOR SEQ. ID. NO:4

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 437 base pairs
 (B) TYPE: Nucleic acid
 (C) STRANDEDNESS: Double
 (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: cDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Eucalyptus grandis

(xi) SEQUENCE DESCRIPTION: SEQ. ID. No. 4

ATGGGTGGC ACCGGTCTT TGATCCTTTG ATGGCCACGG AGTGACATC 50
 CCTGCTCCG CCGACATTGG TTATGAGCAC GAGGTTGAAA TAAGAATGGC 100
 CGTTGACGGT GAACCGGATC CTTCCGCTTC TCCTGCACCT CACTCTTCGG 150
 TAGGCCACCG GGACGATCCC GGCCCTGTAC TGGCAATGT GCTGGAAGAC 200
 CGGCTGGGAG AGGTGGAAT GGAGTTGAGG AGGGTCGCAC CACCCTCCTG 250
 GAGGGCAGAA GTTGGTGGCC GTGACCACAA TGGCGCCCGG GAGGCACCAC 300
 TGGGGTGGT TCACGCACCG GAGCTCAAAG CACGCGCCGC AGCTCAGCCC 350
 ATTGTTGAAC AATGCAGTGC TCAGTGCAGC TGTTGTTTGTG CCGTACCCTT 400
 GGCTGTATAG ATTCCCATAA CCACACGCCC CCCCCAT 437

665250 04500000

(2) INFORMATION FOR SEQ. ID. NO:5**(i) SEQUENCE CHARACTERISTICS:**

(A) LENGTH:	437 base pairs
(B) TYPE	Nucleic acid
(C) STRANDEDNESS:	Double
(D) TOPOLOGY:	Linear

(ii) MOLECULE TYPE:	cDNA
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(vi) ORIGINAL SOURCE:

(A) ORGANISM:	Eucalyptus grandis
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(xi) SEQUENCE DESCRIPTION:	SEQ. ID. No. 5
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ATGGGTTGCC ACCGGGTCTT TGATCCTTTG ATGCCACGG AGTGCACATC	50
CCCTGCTCCG CCGACATTGG TTATGAGCAC GAGGTTGAAA TAAGAATGGC	100
CGTTGACGGT GAACCGGATC CCTCCGCTTC TCCTGCACCT CACTCTTCGG	150
TAGGCCACAG GGACGATCCC GGCCCTGTAC TGGCAATGT GCTGGAAGAC	200
AGGCTGGGAG AGGTGAAAT GGAGTTGAGG AGGGTCGCAC CACCCTCCTG	250
GAGGGCAGAA GTTGGTCGCC GTGACAACAA TGGCGCCCGG GAGGCACCAC	300
TGCGGGTCGT TCACGCACCG GAGCTCAAAG CACGCGCCGC AGCTCAGCCC	350
ATTGTTGAAC AATGCAGTGC TCAGTGCAGC TGIGTTTG TGCGTACCCCTT	400
GGCTGTATAG ATTCCCATAA CCACACGCCC CCCCCAT	437

005200 005200 005200

(i) SEQUENCE CHARACTERISTICS:

488 base pairs

Nucleic acid

Double

Linear

cDNA

Eucalyptus grandis

Eucalyptus grandis

SEQ. ID. No. 6

SEQ. ID. No. 6

CCTTGACATG	GTCTGCCACC	TTGTCCGCGA	ACCCCTTCACG	GCGACCGAGT	50
TGACGTTGCC	TGCGCCGCCG	ACGTTTGTGA	CGAGGACGAG	CTTGAAGTAT	100
GAGTTGCCGT	TGATGGTGAA	CCGGATGCCCT	CCTCTCCTCC	TGCACGTCAC	150
CCTCCTGTAC	GCAACGTGGA	CGATGCCCGC	TGGTACTTIG	GCAATGTGCT	200
GGAAGACGGG	CTGGGAGATG	TCGAAGTGGT	GTGGGGCGG	GTTGCACCAT	250
CGCCCGCGT	TGTTTGGGAG	GGCGTTGTTT	GGCGGGCAGA	AGTTTGTGGC	300
GGTGACGACG	ATGGAGCCGC	CCAGGCACCA	CTTTCCGTTCG	TTCACGCACC	350
GGATCTCGAA	GCACGACCCC	CAGCTCAGCC	CGTTTMTTAA	CAGCGCCGTG	400
CTCAGCGCGG	CCGTGTTTCGT	ACCGTAGCCC	TGGCTGTACA	GGTTGCCG	448

(2) INFORMATION FOR SEQ. ID. NO:7**(i) SEQUENCE CHARACTERISTICS:**

(A) LENGTH:	19 nucleotides
(B) TYPE	Nucleic acid
(C) STRANDEDNESS:	Single
(D) TOPOLOGY:	Linear

(ii) MOLECULE TYPE:	Synthetic DNA
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(xi) SEQUENCE DESCRIPTION:	SEQ. ID. No. 7
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ATGGIGGIGC NTGTGGNTA

19

Key I = Inosine

N = A, G, T, or C

(2) INFORMATION FOR SEQ. ID. NO:8**(i) SEQUENCE CHARACTERISTICS:**

(A) LENGTH:	20 nucleotides
(B) TYPE	Nucleic acid
(C) STRANDEDNESS:	Single
(D) TOPOLOGY:	Linear

(ii) MOLECULE TYPE:	Synthetic DNA
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(xi) SEQUENCE DESCRIPTION:	SEQ. ID. No. 8
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TGCCARTTYT GNCCCCARTT

20

Key R = A or G

Y = T or C

N = A, G, T or C

669260 649660